



PAT MCCRORY

*Governor*

DONALD R. VAN DER VAART

*Secretary*

S. JAY ZIMMERMAN

*Director*

October 27, 2016

Mr. Harry Sideris, Senior Vice President  
Environmental, Health and Safety  
Duke Energy Carolinas, LLC  
Mail Code EC13K  
P.O. Box 1006  
Charlotte, North Carolina 28201-1006

Subject: Issuance of NPDES Permit  
Permit NC0003468  
Dan River Combined Cycle Station  
Rockingham County  
Facility Class I

Dear Mr. Sideris:

The Division of Water Resources is forwarding herewith the Final NPDES permit for Dan River Combined Cycle Station. This permit renewal is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated October 15, 2007 (or as subsequently amended).

A public hearing was held on August 31, 2016 in Eden seeking comments on the Draft permit. This Final permit incorporates recommendations of the DWR Hearing Officer and EPA as well as other changes:

- The Oil and Grease limits and TSS limits were reduced (Outfall 002) to be consistent with the previous permit. This change was made to meet the recommendation of the Hearing Officer.
- The Total Iron limits were added to the Outfall 002 to be consistent with the previous permit. This change was made to meet the recommendation of the Hearing Officer.
- The Special Condition A. (13.) was corrected to meet the recommendation of the Hearing Officer.
- The requirements for continuous pH and TSS monitoring with automatic pump shutoff under prescribed conditions were added to the permit to address the EPA comment (Outfall 002).
- The requirements to treat all the decanting and dewatering wastewater by physical-chemical treatment facilities were added to the permit to address the EPA comment (Outfall 002).
- The Special Condition A. (10.) was corrected to eliminate "overflow from the settling basin". This change was made to address the EPA comment.
- The clarification regarding the amount of asbestos fibers allowed in the discharge was added to the permit to address the EPA comment.
- The Plan for Identification of New Discharges was added to the permit to address the EPA comment.
- The Total Aluminum limits were removed from Outfall 102 and Outfall 103 since North Carolina does not have Al standard and approximately 89% of the surface water samples in the state exceeds the EPA recommended criteria of 87 µg/L.

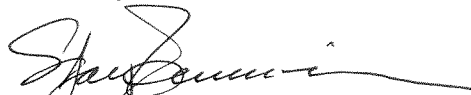
- The weekly monitoring for Total Chromium, Total Lead, Total Cadmium, Total Copper, Total Zinc, and Total Dissolved Solids was added to Outfall 002 to address the EPA comment.

If any parts, measurement frequencies, or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714. Unless such a demand is made, this permit shall be final and binding.

Please take notice that this permit is not transferable except after notice to the Division of Water Resources. The Division may require modification or revocation and reissuance of the permit. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Water Resources, the Division of Land Resources, the Coastal Area Management Act, or any other federal or local governmental permit.

If you have any questions on this permit, please contact Sergei Chernikov at 919-807-6386.

Sincerely,



S. Jay Zimmerman, P.G.  
Director, Division of Water Resources

Hardcopy: Central Files,  
NPDES Files  
Winston-Salem Regional Office, Water Quality

E-copy: US EPA, Region IV  
Aquatic Toxicology Unit

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER RESOURCES

**PERMIT**

TO DISCHARGE WASTEWATER UNDER THE  
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

**Duke Energy Carolinas, LLC**

is hereby authorized to discharge wastewater from a facility located at the

**Dan River Combined Cycle Station**

864 South Edgewood Road  
Eden, NC  
Rockingham County

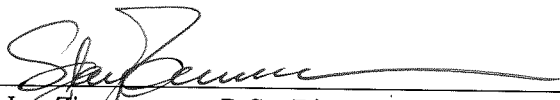
to receiving waters designated as the Dan River in the Roanoke River Basin

in accordance with effluent limitations, monitoring requirements, and other applicable conditions set forth in Parts I, II, and III hereof.

This permit shall become effective December 1, 2016.

This permit and authorization to discharge shall expire at midnight on November 30, 2021.

Signed this day October 27, 2016.

  
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S. Jay Zimmerman P.G., Director  
Division of Water Resources  
By Authority of the Environmental Management Commission

**SUPPLEMENT TO PERMIT COVER SHEET**

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked. As of this permit issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

**Duke Energy Carolinas, LLC**

is hereby authorized to:

1. Continue to discharge the following:
  - Outfall 001: once-through cooling water and cooling tower blowdown from the combined cycle unit, intake screen backwash, plant collection sumps (low volume wastes), and treated domestic wastewater;
  - Internal Outfall 001A (discharges to Outfall 001): wastes from the filtered water plant including miscellaneous wash down water and laboratory wastes (low volume waste sources);
  - Outfall 002: an ash basin discharge consisting of low volume wastes, boiler cleaning wastewater, ash disposal, stormwater, boiler blowdown, and metal washing wastewater;
  - Outfall 002A: a yard sump overflow consisting of stormwater runoff, miscellaneous sumps, and coal yard runoff;
  - Seep Outfalls 102, 103, 104 (Outfall 104 also contains stormwater): 3 potentially contaminated groundwater seeps; and
  
2. Discharge from said treatment works at the location specified on the attached map into the Dan River (Seep Outfall 104 and Railroad Branch (Seep Outfalls 102 and 103) which is classified C waters in the Roanoke River Basin.

**Part I****A. (1.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001)** [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the permittee is authorized to discharge once-through cooling water, intake screen backwash, cooling tower blowdown, plant collections sumps, and treated domestic wastewater from **Outfall 001**. Such discharges shall be limited and monitored<sup>5</sup> by the permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location <sup>1</sup>
Flow, MGD			Daily	Pump Logs	Upstream or Effluent
Temperature,	35.0 °C		Daily	Grab	Effluent
Temperature,		32.0 °C <sup>2</sup>	Daily	Grab	Downstream
Temperature, °C <sup>3</sup>			Daily	Grab	Upstream, Effluent
Total Iron, mg/L			Quarterly	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	2/Month	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	2/Month	Grab	Effluent
BOD, 5-day, 20° C	30.0 mg/L	45.0 mg/L	Monthly	Grab	Effluent
Fecal Coliform (geo. mean)	200/100 mL	400/100 mL	Monthly	Grab	Effluent
pH	6.0 ≤ pH ≤ 9.0		2/Month	Grab	Effluent
Total Residual Chlorine <sup>4</sup>		28.0 µg/L	2/Month	Grab	Effluent
Total Mercury <sup>6</sup>	47.0 ng/L		Quarterly	Grab	Effluent

**Notes:**

1. Sample locations: Upstream – at intake; Downstream – downstream approximately two (2) miles near the NCSR 700 bridge crossing; Effluent - at point downstream of combined wastewaters from the combined cycle turbine unit.
2. In no case should the ambient temperature exceed 32°C as a result of Dan River Steam Station operations. The ambient temperature shall be defined as the daily average downstream water temperature. When the effluent temperature is recorded below 32°C as a daily average, then monitoring and reporting of the downstream water temperature is not required. In cases where the permittee experiences equipment problems and is unable to obtain daily temperatures from the existing temperature monitoring system, temperature monitoring must be reestablished within five working days.
3. The daily average temperature of the effluent shall be such as not to exceed 10°C if the daily average intake temperature is below 2.5°C, and shall not exceed two times the intake temperature (°C) plus 5 if the daily average intake temperature ranges from 2.5°C to 12.8°C. This limitation is in effect only when a single control unit is operating.
4. Total Residual Chlorine compliance is required only if chlorine or chlorine derivative is added to the cooling water. The Division shall consider all effluent TRC values reported below 50 µg/L to be in compliance with the permit. However, the permittee shall continue to record and submit all values reported by a North Carolina certified laboratory (including field certified), even if these values fall below 50 µg/L.
5. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (22.).
6. The facility shall use EPA method 1631E. Annual average limit.

The mixing zone is defined as the area extending from the power plant intake to the NCSR 700 bridge crossing (downstream approximately two miles).

Based upon studies conducted by the permittee and submitted to the Division, it has been determined pursuant to Section 316(a) of the Clean Water Act that the thermal component of the discharge assures the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in the receiving water.

All domestic wastewater produced at the power plant is to be fully treated through the onsite wastewater treatment system prior to being discharged.

The permittee shall obtain authorization from the Division of Water Resources prior to using any biocide in the cooling water; see condition A. (12.).

There shall be no discharge of floating solids or foam visible in other than trace amounts.

**A. (2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001A)** [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the permittee is authorized to discharge wastewater from the filtered water plant including wash down water and laboratory wastes (low volume waste sources) through **Internal Outfall 001A**. Such discharges shall be limited and monitored<sup>2</sup> by the permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Average	Measurement Frequency	Sample Type	Sample Location <sup>1</sup>
Total Suspended Solids	30.0 mg/L	100.0 mg/L	2/Month	Grab	Effluent
Oil & Grease	15.0 mg/L	20.0 mg/L	2/Month	Grab	Effluent
pH	6.0 ≤ pH ≤ 9.0		2/Month	Grab	Effluent

Notes:

1. Effluent sample location shall be at point downstream of the oil separator and prior to mixing with outfall 001.
2. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (22.).

Should no flow occur during a given month, the words "no flow" should be clearly written on the front of the DMR. All samples shall be a representative discharge.

There shall be no discharge of floating solids or foam visible in other than trace amounts.

**A. (3.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002-normal operations/decanting)** [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the permittee is authorized to discharge effluent from **Outfall 002 (decanting the free water above the settled ash layer that does not involve mechanical disturbance of the ash)** consisting of low volume wastes, boiler cleaning wastewater, ash disposal, stormwater, boiler blowdown, and metal washing wastewater. Such discharges shall be limited and monitored<sup>5</sup> by the permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location <sup>1</sup>
Flow, MGD			Daily	Pump Logs or estimate	Effluent
pH <sup>8</sup>	6.0 ≤ pH ≤ 9.0		Monthly	Grab	Effluent
Total Suspended Solids <sup>6</sup>	29.0 mg/L	96.0 mg/L	Monthly	Grab	Effluent
Oil and Grease	14.0 mg/L	19.0 mg/L	Monthly	Grab	Effluent
Total Kjeldahl Nitrogen (TKN), mg/L			Annually	Grab	Effluent
Total Nitrogen (TN), mg/L TN = (NO <sub>2</sub> + NO <sub>3</sub> ) + TKN			Annually	Calculated	Effluent
Total Phosphorus, mg/L			Annually	Grab	Effluent
Chronic Toxicity <sup>2</sup>			Monthly	Grab	Effluent
Turbidity <sup>3</sup> , NTU			Monthly	Grab	Effluent
Sulfate, mg/L			Monthly	Grab	Effluent
Total Hardness, mg/L			Monthly	Grab	Effluent
Total Arsenic, µg/L			Weekly	Grab	Effluent
Total Chromium, µg/L			Weekly	Grab	Effluent
Total Lead, µg/L			Weekly	Grab	Effluent
Total Copper, µg/L			Weekly	Grab	Effluent
Total Cadmium, µg/L			Weekly	Grab	Effluent
Total Zinc, µg/L			Weekly	Grab	Effluent
Total Dissolved Solids, mg/L			Weekly	Grab	Effluent
Total Mercury <sup>4</sup>	47.0 ng/L		Weekly	Grab	Effluent
Total Iron <sup>7</sup>	1.0 mg/L	1.0 mg/L	Weekly	Grab	Effluent
Total Selenium, µg/L			Weekly	Grab	Effluent
Nitrate/nitrite as N			Monthly	Grab	Effluent

**Notes:**

1. Effluent sampling shall be conducted at the discharge from the ash settling pond prior to mixing with any other waste stream.
2. Chronic Toxicity (*Ceriodaphnia dubia*) at 1.1%; See Special Condition A. (11.).
3. The net turbidity shall not exceed 50 NTU using a grab sample and measured by the difference between the effluent turbidity and the background turbidity. The sample for the background turbidity shall be taken at point in the receiving waterbody upstream of the discharge location, and the background turbidity and the effluent turbidity samples shall be taken within the same 24 hour period.  
NTU - Nephelometric Turbidity Unit.
4. The facility shall use EPA method 1631E. Annual average limit.
5. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (22.).

6. The facility shall continuously monitor TSS concentration when the decanting process commences and the pump shall be shutoff automatically when the one half of the Daily Maximum limit (15 minutes average) is exceeded. Pumping will be allowed to continue if interruption might result in a dam failure or damage. The continuous TSS monitoring only required when the pumps are employed.
7. Monitoring for total iron and its discharge limits apply only if wastewater from a boiler chemical cleaning is generated and discharged to the ash basin.
8. The facility shall continuously monitor pH when the decanting process commences and the decanting pump shall be shutoff automatically when 15 minutes running average pH falls below 6.1 standard units or rises above 8.9 standard units. Pumping will be allowed to continue if interruption might result in a dam failure or damage.

**There shall be no discharge of floating solids or visible foam in other than trace amounts.**

**The facility is allowed to drawdown the wastewater in the ash pond to no less than three feet above the ash.**

**The level of water in the ash pond should not be lowered more than 1 ft/week, unless approved by the DEQ Dam Safety Program. The facility shall use a floating pump station with free water skimmed from the basin surface using an adjustable weir.**

**The limits and conditions in Section A. (4.) of the permit apply when water in the ash settling basin is lowered below the three feet trigger mark.**

**The facility shall treat the wastewater discharged from the ash pond/ponds by the physical-chemical treatment facilities. The facility shall submit plans for the proposed treatment technologies to the Complex NPDES permitting unit and the Winston-Salem Regional Office 2 weeks prior to the commencement of the treated discharge.**

**The facility shall notify the Complex NPDES Permitting Unit and the Winston-Salem Regional Office 1 week prior to the commencement of the treated discharge.**



**A. (4.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002-dewatering)** [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the commencement date of the dewatering operation and lasting until expiration, the Permittee is authorized to discharge effluent from **Outfall 002 (dewatering-removing the interstitial water)** consisting of low volume wastes, boiler cleaning wastewater, ash disposal, stormwater, boiler blowdown, and metal washing wastewater. Such discharges shall be limited and monitored<sup>5</sup> by the permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location <sup>1</sup>
Flow		1.5 MGD	Weekly	Pump Logs or estimate	Effluent
pH <sup>8</sup>	6.0 ≤ pH ≤ 9.0		Weekly	Grab	Effluent
Total Suspended Solids <sup>6</sup>	29.0 mg/L	96.0 mg/L	Weekly	Grab	Effluent
Oil and Grease	14.0 mg/L	19.0 mg/L	Weekly	Grab	Effluent
Total Kjeldahl Nitrogen (TKN), mg/L			Weekly	Grab	Effluent
Total Nitrogen (TN), mg/L TN = (NO <sub>2</sub> + NO <sub>3</sub> ) + TKN			Weekly	Calculated	Effluent
Total Phosphorus, mg/L			Weekly	Grab	Effluent
Chronic Toxicity <sup>2</sup>			Monthly	Grab	Effluent
Turbidity <sup>3</sup> , NTU			Weekly	Grab	Effluent
Sulfate, mg/L			Weekly	Grab	Effluent
Total Hardness, mg/L			Weekly	Grab	Effluent
Total Arsenic, µg/L			Weekly	Grab	Effluent
Total Chromium, µg/L			Weekly	Grab	Effluent
Total Lead, µg/L			Weekly	Grab	Effluent
Total Copper, µg/L			Weekly	Grab	Effluent
Total Cadmium, µg/L			Weekly	Grab	Effluent
Total Zinc, µg/L			Weekly	Grab	Effluent
Total Dissolved Solids, mg/L			Weekly	Grab	Effluent
Total Mercury <sup>4</sup>	47.0 ng/L		Weekly	Grab	Effluent
Total Iron <sup>7</sup>	1.0 mg/L	1.0 mg/L	Weekly	Grab	Effluent
Total Selenium, µg/L			Weekly	Grab	Effluent
Nitrate/nitrite as N			Weekly	Grab	Effluent

Notes:

1. Effluent sampling shall be conducted at the discharge from the ash settling pond prior to mixing with any other waste stream.
2. Chronic Toxicity (*Ceriodaphnia dubia*) at 1.1%; See Special Condition A. (11.).
3. The net turbidity shall not exceed 50 NTU using a grab sample and measured by the difference between the effluent turbidity and the background turbidity. The sample for the background turbidity shall be taken at point in the receiving waterbody upstream of the discharge location, and the background turbidity and the effluent turbidity samples shall be taken within the same 24 hour period.  
NTU - Nephelometric Turbidity Unit.
4. The facility shall use EPA method 1631E. Annual average limit.
5. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (22.).

6. The facility shall continuously monitor TSS concentration when the dewatering process commences and the dewatering pump shall be shutoff automatically when the one half of the Daily Maximum limit (15 minutes average) is exceeded. Pumping will be allowed to continue if interruption might result in a dam failure or damage. The continuous TSS monitoring only required when the pumps are employed.
7. Monitoring for total iron and its discharge limits apply only if wastewater from a boiler chemical cleaning is generated and discharged to the ash basin.
8. The facility shall continuously monitor pH when the dewatering process commences and the dewatering pump shall be shutoff automatically when 15 minutes running average pH falls below 6.1 standard units or rises above 8.9 standard units. Pumping will be allowed to continue if interruption might result in a dam failure or damage.

**There shall be no discharge of floating solids or visible foam in other than trace amounts.**

**The level of water in the ash pond should not be lowered more than 1 ft/week, unless approved by the DEQ Dam Safety Program.**

**The facility shall treat the wastewater discharged from the ash pond/ponds by the physical-chemical treatment facilities. The facility shall submit plans for the proposed treatment technologies to the Complex NPDES permitting unit and the Winston-Salem Regional Office 2 weeks prior to the commencement of the treated discharge.**

**The facility shall notify the Complex NPDES Permitting Unit and the Winston-Salem Regional Office 1 week prior to the commencement of the treated discharge.**

#### **A. (5.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002A)** [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the permittee is authorized to discharge rainfall runoff including runoff from the coal yard through **Outfall 002A** –yard sump overflows. Such discharges shall be limited and monitored<sup>2</sup> by the permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location <sup>1</sup>
Flow, MGD			Per discharge event	Pump logs or estimate	Effluent
pH	6.0 ≤ pH ≤ 9.0		Per discharge event	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Per discharge event	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Per discharge event	Grab	Effluent

#### Notes:

1. Effluent sampling shall be prior to the discharge to the receiving stream.
2. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (22.).

All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "no flow" should be clearly written on the front of the DMR. All samples shall be taken from a representative discharge.

**There shall be no discharge of floating solids or foam visible in other than trace amounts.**

**A. (6.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 102)** [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from outfall 102 – Seep Discharge. Such discharges shall be limited and monitored<sup>1</sup> by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency <sup>2</sup>	Sample Type	Sample Location
Flow, MGD			Monthly/Quarterly	Estimate	Effluent
pH <sup>3</sup>			Monthly/Quarterly	Grab	Effluent
TSS	30.0 mg/L	100.0 mg/L	Monthly/Quarterly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly/Quarterly	Grab	Effluent
Fluoride, mg/L			Monthly/Quarterly	Grab	Effluent
Total Mercury <sup>4</sup> , ng/L			Monthly/Quarterly	Grab	Effluent
Total Barium, mg/L			Monthly/Quarterly	Grab	Effluent
Total Iron, mg/L			Monthly/Quarterly	Grab	Effluent
Total Manganese, µg/L			Monthly/Quarterly	Grab	Effluent
Total Zinc, µg/L			Monthly/Quarterly	Grab	Effluent
Total Arsenic	150.0 µg/L	340.0 µg/L	Monthly/Quarterly	Grab	Effluent
Total Aluminum			Monthly/Quarterly	Grab	Effluent
Total Cadmium, µg/L			Monthly/Quarterly	Grab	Effluent
Total Chromium, µg/L			Monthly/Quarterly	Grab	Effluent
Total Copper, µg/L			Monthly/Quarterly	Grab	Effluent
Total Lead	2.94 µg/L	75.5 µg/L	Monthly/Quarterly	Grab	Effluent
Total Nickel, µg/L			Monthly/Quarterly	Grab	Effluent
Total Selenium, µg/L			Monthly/Quarterly	Grab	Effluent
Nitrate/nitrite as N, mg/L			Monthly/Quarterly	Grab	Effluent
Sulfates, mg/L			Monthly/Quarterly	Grab	Effluent
Chlorides, mg/L			Monthly/Quarterly	Grab	Effluent
TDS, mg/L			Monthly/Quarterly	Grab	Effluent
Total Hardness, mg/L			Monthly/Quarterly	Grab	Effluent
Temperature, °C			Monthly/Quarterly	Grab	Effluent
Conductivity, µmho/cm			Monthly/Quarterly	Grab	Effluent

**Notes:**

1. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (22.).
2. The facility shall conduct monthly sampling from the effective date of the permit. After one year from the effective date of the permit the monitoring will be reduced to quarterly
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
4. The facility shall use EPA method 1631E.

**If the facility is unable to obtain a seep sample due to the dry or low flow conditions preventing the facility from obtaining a representative sample, then "no flow" should be reported on the DMR. This requirement is established in the Section D of the Standard Conditions and 40 CFR 122.41 (j).**

**There shall be no discharge of floating solids or visible foam in other than trace amounts.**

**A. (7.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 103)** [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from outfall 103 – Seep Discharge. Such discharges shall be limited and monitored<sup>1</sup> by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency <sup>2</sup>	Sample Type	Sample Location
Flow, MGD			Monthly/Quarterly	Estimate	Effluent
pH <sup>3</sup>			Monthly/Quarterly	Grab	Effluent
TSS	30.0 mg/L	100.0 mg/L	Monthly/Quarterly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly/Quarterly	Grab	Effluent
Fluoride, mg/L			Monthly/Quarterly	Grab	Effluent
Total Mercury <sup>4</sup> , ng/L			Monthly/Quarterly	Grab	Effluent
Total Barium, mg/L			Monthly/Quarterly	Grab	Effluent
Total Iron, mg/L			Monthly/Quarterly	Grab	Effluent
Total Manganese, µg/L			Monthly/Quarterly	Grab	Effluent
Total Zinc, µg/L			Monthly/Quarterly	Grab	Effluent
Total Arsenic	150.0 µg/L	340.0 µg/L	Monthly/Quarterly	Grab	Effluent
Total Aluminum			Monthly/Quarterly	Grab	Effluent
Total Cadmium, µg/L			Monthly/Quarterly	Grab	Effluent
Total Chromium, µg/L			Monthly/Quarterly	Grab	Effluent
Total Copper, µg/L			Monthly/Quarterly	Grab	Effluent
Total Lead	2.94 µg/L	75.5 µg/L	Monthly/Quarterly	Grab	Effluent
Total Nickel, µg/L			Monthly/Quarterly	Grab	Effluent
Total Selenium, µg/L			Monthly/Quarterly	Grab	Effluent
Nitrate/nitrite as N, mg/L			Monthly/Quarterly	Grab	Effluent
Sulfates, mg/L			Monthly/Quarterly	Grab	Effluent
Chlorides, mg/L			Monthly/Quarterly	Grab	Effluent
TDS, mg/L			Monthly/Quarterly	Grab	Effluent
Total Hardness, mg/L			Monthly/Quarterly	Grab	Effluent
Temperature, °C			Monthly/Quarterly	Grab	Effluent
Conductivity, µmho/cm			Monthly/Quarterly	Grab	Effluent

**Notes:**

- Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (22.).
- The facility shall conduct monthly sampling from the effective date of the permit. After one year from the effective date of the permit the monitoring will be reduced to quarterly
- The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
- The facility shall use EPA method 1631E.

**If the facility is unable to obtain a seep sample due to the dry or low flow conditions preventing the facility from obtaining a representative sample, then “no flow” should be reported on the DMR. This requirement is established in the Section D of the Standard Conditions and 40 CFR 122.41 (j).**

**There shall be no discharge of floating solids or visible foam in other than trace amounts.**

**A. (8.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 104)** [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from outfall 104 – Seep Discharge and stormwater discharge. Such discharges shall be limited and monitored<sup>1</sup> by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency <sup>2</sup>	Sample Type	Sample Location
Flow, MGD			Monthly/Quarterly	Estimate	Effluent
pH <sup>3</sup>			Monthly/Quarterly	Grab	Effluent
TSS	30.0 mg/L	100.0 mg/L	Monthly/Quarterly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly/Quarterly	Grab	Effluent
Fluoride, mg/L			Monthly/Quarterly	Grab	Effluent
Total Mercury <sup>4</sup> , ng/L			Monthly/Quarterly	Grab	Effluent
Total Barium, mg/L			Monthly/Quarterly	Grab	Effluent
Total Iron, mg/L			Monthly/Quarterly	Grab	Effluent
Total Manganese, µg/L			Monthly/Quarterly	Grab	Effluent
Total Zinc, µg/L			Monthly/Quarterly	Grab	Effluent
Total Arsenic, µg/L			Monthly/Quarterly	Grab	Effluent
Total Cadmium, µg/L			Monthly/Quarterly	Grab	Effluent
Total Chromium, µg/L			Monthly/Quarterly	Grab	Effluent
Total Copper, µg/L			Monthly/Quarterly	Grab	Effluent
Total Lead, µg/L			Monthly/Quarterly	Grab	Effluent
Total Nickel, µg/L			Monthly/Quarterly	Grab	Effluent
Total Selenium, µg/L			Monthly/Quarterly	Grab	Effluent
Nitrate/nitrite as N, mg/L			Monthly/Quarterly	Grab	Effluent
Sulfates, mg/L			Monthly/Quarterly	Grab	Effluent
Chlorides, mg/L			Monthly/Quarterly	Grab	Effluent
TDS, mg/L			Monthly/Quarterly	Grab	Effluent
Total Hardness, mg/L			Monthly/Quarterly	Grab	Effluent
Temperature, °C			Monthly/Quarterly	Grab	Effluent
Conductivity, µmho/cm			Monthly/Quarterly	Grab	Effluent

**Notes:**

- Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (22.).
- The facility shall conduct monthly sampling from the effective date of the permit. After one year from the effective date of the permit the monitoring will be reduced to quarterly
- The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
- The facility shall use EPA method 1631E.

**If the facility is unable to obtain a seep sample due to the dry or low flow conditions preventing the facility from obtaining a representative sample, then "no flow" should be reported on the DMR. This requirement is established in the Section D of the Standard Conditions and 40 CFR 122.41 (j).**

**There shall be no discharge of floating solids or visible foam in other than trace amounts.**

**A. (9.) TOXICITY RE-OPENER CONDITION**

This permit shall be modified, or revoked and reissued, to incorporate additional toxicity limitations and monitoring requirements in the event that toxicity testing or other studies conducted on the effluent or receiving stream indicate that detrimental effects may be expected in the receiving stream as a result of this discharge.

**A. (10.) SPECIAL CONDITIONS**

The following special conditions are applicable to all outfalls regulated by this permit:

- a) There shall be no discharge of polychlorinated biphenyl compounds such as those once commonly used for transformer fluid.
- b) Nothing contained in this permit shall be construed as a waiver by the permittee of any right to a hearing it may have pursuant to State or Federal laws or regulations.
- c) Discharge of any waste resulting from the combustion of toxic or hazardous waste to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized in this permit.
- d) The permittee shall report all visible discharges of floating materials (such as an oil slick) to the Director when submitting DMRs.
- e) "Upset," means an exceptional incident in which there is an unintentional and temporary non-compliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or improper operations.
- f) All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "no flow" should be clearly written on the front of the DMR.
- g) EPA methods 200.7 or 200.8 (or the most current versions) shall be used for analyses of all metals except for total mercury.
- h) All effluent samples for all external outfalls shall be taken at the most accessible location after the final treatment but prior to discharge to waters of the U.S. (40 CFR 122.41(j)).
- i) The term *low volume waste sources* means wastewater from all sources except those for which specific limitations are otherwise established in this part (40 CFR 423.11 (b)).
- j) The term *chemical metal cleaning waste* means any wastewater resulting from cleaning any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning (40 CFR 423.11 (c)).
- k) The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning (40 CFR 423.11 (d)).
- l) For all outfalls where the flow measurement is to be "estimated" the estimate can be done by using calibrated V-notch weir, stop-watch and graduated cylinder, or other method approved by the Division.
- m) The concentration of asbestos in any wastewater shall not exceed 7 million fibers per liter.

**A. (11.) CHRONIC TOXICITY LIMIT (Monthly, Outfall 002)**

[15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of 1.1 %.

The permit holder shall perform at a minimum, *monthly* monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised December 2010, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised- December 2010) or subsequent versions. Effluent sampling for this testing must be

obtained during representative effluent discharge and shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

**If the test procedure performed as the first test of any month results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-December 2010) or subsequent versions.**

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWR Form AT-3 (original) is to be sent to the following address:

Attention: North Carolina Division of Water Resources  
Water Sciences Section/Aquatic Toxicology Branch  
1623 Mail Service Center  
Raleigh, North Carolina 27699-1623

Completed Aquatic Toxicity Test Forms shall be filed with the Water Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Water Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month. Assessment of toxicity compliance is based on the toxicity testing month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Resources indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an **invalid test** and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

#### **A. (12.) BIOCIDES CONDITION**

The permittee shall not use any biocides except those approved in conjunction with the permit application. The permittee shall notify the Director in writing not later than ninety (90) days prior to instituting use of any additional biocide used in cooling systems which may be toxic to aquatic life other than those previously reported to the Division of Water Resources. Such notification shall include completion of Biocide Worksheet Form 101 and a map locating the discharge point and receiving stream. Completion of Biocide Worksheet Form 101 is not necessary for those outfalls containing toxicity testing. Division approval is not necessary for the introduction of new biocides into outfalls currently tested for whole effluent toxicity.

**A. (13.) ASH POND WORKING CAPACITY**

On an annual basis, the permittee shall determine and report to the Division: (1) the actual free water volume of the ash pond, (2) the physical measurements of the dimensions of the free water volume in sufficient detail to allow validation of the calculated volume.

**A. (14.) CLEAN WATER ACT SECTION 316(a) THERMAL VARIANCE**

The thermal variance granted under Section 316(a) terminates on expiration of this NPDES permit. Should the permittee wish a continuation of its 316(a) thermal variance beyond the term of this permit, reapplication for such continuation shall be submitted in accordance with 40 CFR Part 125, Subpart H and Section 122.21(1) (6) not later than 180 days prior to permit expiration. Reapplication shall include a basis for continuation such as a) plant operating conditions and load factors are unchanged and are expected to remain so for the term of the reissued permit; b) there are no changes to plant discharges or other discharges in the plant site area which could interact with the thermal discharges; and c) there are no changes to the biotic community of the receiving water body which would impact the previous variance determination.

The next 316(a) studies shall be performed in accordance with the Division of Water Resources approved plan. The temperature analysis and the balanced and indigenous study plan shall conform to the specifications outlined in 40 CFR 125 Subpart H and the EPA's Draft 316(a) Guidance Manual, dated 1977. EPA shall be provided an opportunity to review the plan prior to the commencement of the study.

Copies of all the study plans, study results, and any other applicable materials should be submitted to:

- 1) Electronic Version Only (pdf and CD)  
Division of Water Resources  
WQ Permitting Section - NPDES  
1617 Mail Service Center  
Raleigh, NC 27699-1617
- 2) Electronic Version (pdf and CD) and Hard Copy  
Division of Water Resources  
Water Sciences Section  
1621 Mail Service Center  
Raleigh, NC 27699-1621

**A. (15.) CLEAN WATER ACT SECTION 316(B)**

The permittee shall comply with the Cooling Water Intake Structure Rule per 40 CFR 125.95. The permittee shall submit all the materials required by the Rule with the next renewal application.

**A. (16.) GROUNDWATER MONITORING WELL CONSTRUCTION AND SAMPLING (State Enforceable Only)**

The permittee shall conduct groundwater monitoring to determine the compliance of this NPDES permitted facility with the current groundwater standards found under 15A NCAC 2L .0200. The monitoring shall be conducted in accordance with the most recent sampling plan approved by the Division.

**A. (17.) STRUCTURAL INTEGRITY INSPECTIONS OF ASH POND DAM**

The facility shall meet the dam design and dam safety requirements per 15A NCAC 2K.



**A. (18.) ASH POND CLOSURE**

The facility shall prepare an Ash Ponds Closure Plan. This Plan shall be submitted to the Division one month prior to the closure of the ash ponds.

**A. (19.) INSTREAM MONITORING**

The facility shall conduct semiannual instream monitoring (4000 ft. upstream and 10,000 ft. downstream of the Outfall 002 and in the Railroad Branch 50 ft. upstream of the first seep and 50 ft. downstream of the last seep) for dissolved arsenic, dissolved selenium, dissolved mercury (method 1631E), dissolved chromium, dissolved lead, dissolved cadmium, dissolved copper, total hardness, and dissolved zinc. The monitoring results shall be submitted with the NPDES permit renewal application and reported on the DMRs.

**A. (20.) APPLICABLE STATE LAW (STATE ENFORCEABLE ONLY)**

This facility shall meet the requirements of Senate Bill 729 (Coal Ash Management Act). This permit may be reopened to include new requirements imposed by Senate Bill 729.

**A. (21.) DOMESTIC WASTEWATER TREATMENT PLANT**

The domestic wastewater treatment facility shall be properly operated and maintained at all times. Its effluent must meet secondary limits for domestic wastewater, and not cause contravention of any water quality standards.

**A. (22.) ELECTRONIC REPORTING OF DISCHARGE MONITORING REPORTS**

[G.S. 143-215.1(b)]

Federal regulations require electronic submittal of all discharge monitoring reports (DMRs) and program reports and specify that, if a state does not establish a system to receive such submittals, then permittees must submit monitoring data and reports electronically to the Environmental Protection Agency (EPA). The final NPDES Electronic Reporting Rule was adopted and became effective on December 21, 2015.

NOTE: This special condition supplements or supersedes the following sections within Part II of this permit (*Standard Conditions for NPDES Permits*):

- Section B. (11.) Signatory Requirements
- Section D. (2.) Reporting
- Section D. (6.) Records Retention
- Section E. (5.) Monitoring Reports

**1. Reporting Requirements [Supersedes Section D. (2.) and Section E. (5.) (a)]**

Effective **December 21, 2016**, the permittee shall report discharge monitoring data electronically using the NC DWR's Electronic Discharge Monitoring Report (eDMR) internet application.

Monitoring results obtained during the previous month(s) shall be summarized for each month and submitted electronically using eDMR. The eDMR system allows permitted facilities to enter monitoring data and submit DMRs electronically using the internet. Until such time that the state's eDMR application is compliant with EPA's Cross-Media Electronic Reporting Regulation (CROMERR), permittees will be required to submit all discharge monitoring data to the state electronically using eDMR and will be required to complete the eDMR submission by printing, signing, and submitting one signed original and a copy of the computer printed eDMR to the following address:

NC DEQ / Division of Water Resources / Water Quality Permitting Section  
ATTENTION: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

If a permittee is unable to use the eDMR system due to a demonstrated hardship or due to the facility being physically located in an area where less than 10 percent of the households have broadband access, then a temporary waiver from the NPDES electronic reporting requirements may be granted and discharge monitoring data may be submitted on paper DMR forms (MR 1, 1.1, 2, 3) or alternative forms approved by the Director. Duplicate signed copies shall be submitted to the mailing address above. See "How to Request a Waiver from Electronic Reporting" section below.

Regardless of the submission method, the first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge.

Starting on **December 21, 2020**, the permittee must electronically report the following compliance monitoring data and reports, when applicable:

- Sewer Overflow/Bypass Event Reports;
- Pretreatment Program Annual Reports; and
- Clean Water Act (CWA) Section 316(b) Annual Reports.

The permittee may seek an electronic reporting waiver from the Division (see "How to Request a Waiver from Electronic Reporting" section below).

## **2. Electronic Submissions**

In accordance with 40 CFR 122.41(l)(9), the permittee must identify the initial recipient at the time of each electronic submission. The permittee should use the EPA's website resources to identify the initial recipient for the electronic submission.

Initial recipient of electronic NPDES information from NPDES-regulated facilities means the entity (EPA or the state authorized by EPA to implement the NPDES program) that is the designated entity for receiving electronic NPDES data [see 40 CFR 127.2(b)].

EPA plans to establish a website that will also link to the appropriate electronic reporting tool for each type of electronic submission and for each state. Instructions on how to access and use the appropriate electronic reporting tool will be available as well. Information on EPA's NPDES Electronic Reporting Rule is found at: <http://www2.epa.gov/compliance/final-national-pollutant-discharge-elimination-system-npdes-electronic-reporting-rule>.

Electronic submissions must start by the dates listed in the "Reporting Requirements" section above.

## **3. How to Request a Waiver from Electronic Reporting**

The permittee may seek a temporary electronic reporting waiver from the Division. To obtain an electronic reporting waiver, a permittee must first submit an electronic reporting waiver request to the Division. Requests for temporary electronic reporting waivers must be submitted in writing to the Division for written approval at least sixty (60) days prior to the date the facility would be required under this permit to begin submitting monitoring data and reports. The duration of a temporary waiver shall not exceed 5 years and shall thereupon expire. At such time, monitoring data and reports shall be submitted electronically to the Division unless the permittee re-applies for and is granted a new temporary electronic reporting waiver by the Division. Approved

electronic reporting waivers are not transferrable. Only permittees with an approved reporting waiver request may submit monitoring data and reports on paper to the Division for the period that the approved reporting waiver request is effective.

Information on eDMR and the application for a temporary electronic reporting waiver are found on the following web page:

<http://deq.nc.gov/about/divisions/water-resources/edmr>

**4. Signatory Requirements [Supplements Section B. (11.) (b) and Supersedes Section B. (11.) (d)]**

All eDMRs submitted to the permit issuing authority shall be signed by a person described in Part II, Section B. (11.) (a) or by a duly authorized representative of that person as described in Part II, Section B. (11.) (b). A person, and not a position, must be delegated signatory authority for eDMR reporting purposes.

For eDMR submissions, the person signing and submitting the DMR must obtain an eDMR user account and login credentials to access the eDMR system. For more information on North Carolina's eDMR system, registering for eDMR and obtaining an eDMR user account, please visit the following web page:

<http://deq.nc.gov/about/divisions/water-resources/edmr>

Certification. Any person submitting an electronic DMR using the state's eDMR system shall make the following certification [40 CFR 122.22]. NO OTHER STATEMENTS OF CERTIFICATION WILL BE ACCEPTED:

*"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."*

**5. Records Retention [Supplements Section D. (6.)]**

The permittee shall retain records of all Discharge Monitoring Reports, including eDMR submissions. These records or copies shall be maintained for a period of at least 3 years from the date of the report. This period may be extended by request of the Director at any time [40 CFR 122.41].

**A. (23.) DISCHARGE FROM SEEPAGE**

Existing Discharges from Seepage

The facility identified 4 unpermitted seeps (all non-engineered) from the ash settling basin. Seep 1, seep 2, and seep 3 discharge to Railroad Branch. Seep 4 discharges to Dan River. The locations of the seeps are identified below and are depicted on the map attached to the permit.

Table 1. Discharge Coordinates and Assigned Outfall Numbers

Discharge ID	Latitude	Longitude	Outfall number
S-1	36.493	-79.711	Not assigned
S-2	36.493	-79.711	102
S-3	36.493	-79.711	103
S-4	36.486	-79.719	104

The outfall for these discharges is through an effluent channel meeting the requirements in 15A NCAC 2B .0228. Within 180 days of the effective date of this permit, the permittee shall demonstrate, through in-stream sampling meeting the requirements of condition A. (19.), that the water quality standards in the receiving stream are not contravened.

Discharges from Seepage Identified After Permit Issuance

The facility shall comply with the "Plan for Identification of New Discharges" as contained in Attachment 2. For any discharge identified pursuant to this Plan, the facility shall, within 90 days of the seep discovery, determine if the discharge seep meets the state water quality standards established in 15A NCAC 2B .0200 and submit the results of this determination to the Division. If the standards are not contravened, the facility shall conduct monitoring for the parameters specified in A. (8.).

If any of the water quality standards are exceeded, the facility shall be considered in violation until one of the options below is fully implemented:

- 1) Submit a complete application for 404 Permit (within 30 days after determining that a water quality standards is exceeded) to pump the seep discharge to one of the existing outfalls, install a pipe to discharge the seep to the Dan River/Railroad Branch, or install an *in-situ* treatment system. After the 404 Permit is obtained, the facility shall complete the installation of the pump, pipe, or treatment system within 180 days from the date of the 404 permit receipt and begin pumping/discharging or treatment.
- 2) Demonstrate through modeling that the decanting and dewatering of the ash basin will result in the elimination of the seep. The modeling results shall be submitted to the Division within 120 days from the date of the seep discovery. Within 180 days from the completion of the dewatering the facility shall confirm that the seep flow ceased. If the seep flow continues, the facility shall choose one of the other options in this Special Condition.
- 3) Demonstrate that the seep is discharging through the designated "Effluent Channel" and the water quality standards in the receiving stream are not contravened. This demonstration should be submitted to the Division no later than 180 days from the date of the seep discovery. The "Effluent Channel" designation should be established by the DEQ Regional Office personnel prior to the issuance of the permit. This permit shall be reopened for cause to include the "Effluent Channel" in a revised permit.

All effluent limits, including water quality-based effluent limits, remain applicable notwithstanding any action by the Permittee to address the violation through one of the identified options, so that any discharge in exceedance of an applicable effluent limit is a violation of the Permit as long as the seep remains flowing.

New Identified Seeps

If new seeps are identified, the facility shall follow the procedures outlined above. The deadlines for new seeps shall be calculated from the date of the seep discovery. The new identified seep is not permitted until the permit is modified and the new seep included in the permit and the new outfall established for the seep.

**A. (24.) FISH TISSUE MONITORING NEAR ASH POND DISCHARGE (Outfall 002)**

The facility shall conduct fish tissue monitoring annually during the permit term and submit the results with the NPDES permit renewal application. The objective of the monitoring is to evaluate potential uptake of pollutants by fish tissue near the Ash Pond discharge. The parameters analyzed in fish tissue shall be arsenic, selenium, and mercury. The monitoring shall be conducted in accordance with the Sampling Plan approved by the Division. Upon approval, the plan becomes an enforceable part of the permit.

## Attachment 1

GROUNDWATER MONITORING PLAN

The permittee shall conduct groundwater monitoring as may be required to determine the compliance of this NPDES permitted facility with the current groundwater Standards found under 15A NCAC 2L .0200.

1. WELL CONSTRUCTION
  - a. Monitoring wells shall be constructed in accordance with 15A NCAC 02C .0108 (Standards of Construction for Wells Other than Water Supply) and any other jurisdictional laws and regulations pertaining to well construction.
  - b. Monitoring wells must be constructed by a North Carolina Certified Well Contractor, the property owner, or the property lessee according to General Statutes 87-98.4. If the construction is not performed by a certified well contractor, the property owner or lessee, provided they are a natural person, must physically perform the actual well construction activities.
  - c. Within 30 days of completion of well construction, a completed Well Construction Record (Form GW-1) must be submitted for each compliance monitoring well to Division of Water Resources, Water Quality Regional Operations Section (WQROS), 1636 Mail Service Center, Raleigh, NC 27699-1636.
  - d. The Winston-Salem Regional Office, telephone number (336) 771-5000, shall approve the location of new compliance monitoring wells prior to installation. The regional office shall be notified at least 48 hours prior to the construction of any compliance monitoring well and such notification to the WQROS regional supervisor shall be made from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
  - e. All monitoring wells shall be regularly maintained. Such maintenance shall include ensuring that the well caps are rust-free and locked at all times, the outer casing is upright and undamaged, and the well does not serve as a conduit for contamination.
  - f. If the Permittee intends to abandon a compliance monitoring well either temporarily or permanently, the Permittee shall justify the abandonment and request approval from the WQROS Regional Office within 30 business days prior to initiating abandonment procedures.
  - g. Monitoring wells shall be abandoned in accordance with 15A NCAC 02C .0113 (Abandonment of Wells). Within 30 days of completion of well abandonment, a completed Well Abandonment Record (Form GW-30) must be submitted for each monitoring well to WQROS, 1636 Mail Service Center, Raleigh, NC 27699-1636.
  - h. A map shall be provided within 60 days when compliance wells are added or deleted from the plan. The map shall be of appropriate scale to easily identify all features overlaid on the most recent aerial photograph. At a minimum, the map shall include the following information:
    - i. The location and identity of each monitoring well.
    - ii. The date the map is prepared and/or revised.
    - iii. Topographic contours in no more than ten (10) foot intervals. For areas of high relief, 20 foot intervals shall be acceptable.
  - i. The map and any supporting documentation shall be sent to the WQROS, 1636 Mail Service Center, Raleigh, NC 27699-1636.
2. GROUNDWATER SAMPLING AND COMPLIANCE.
  - a. The compliance boundary for the disposal system shall be specified in accordance with 15A NCAC 02L .0107(a) or (b) dependent upon the date permitted. An exceedance of groundwater standards at or beyond the compliance boundary is subject to remediation action according to 15A NCAC 02L .0106(c) or (d) as well as enforcement actions in accordance with North Carolina General Statute 143-215.6A through 143-215.6C.

- b. Monitoring wells shall be sampled after construction and thereafter at the frequencies and for the parameters as specified in this plan. All maps, well construction forms, well abandonment forms and monitoring data shall refer to the permit number and the well nomenclature.
  - c. Per 15A NCAC 02H .0800, a Division certified laboratory shall conduct all laboratory analyses for the required effluent, groundwater or surface water parameters.
  - d. The measurement of water levels shall be made prior to purging the wells. The depth to water in each well shall be measured from the surveyed point on the top of the casing.
  - e. The measuring points (top of well casing) of all monitoring wells shall be surveyed to provide the relative elevation of the measuring point for each monitoring well. The measuring points (top of casing) of all monitoring wells shall be surveyed relative to a common datum.
  - f. Two copies of the monitoring well sampling shall be submitted on a Compliance Monitoring Form (GW-59CCR), and received no later than 60 days from the sampling date. Copies of the laboratory analyses shall be kept on site, and made available upon request. The Compliance Monitoring Form (GW-59CCR) shall include this permit number and the appropriate well identification number. The Compliance Monitoring Forms (GW-59CCR) shall be submitted to the Division of Water Resources Information Processing Unit, 1617 Mail Service Center, Raleigh, North Carolina 27699-1617
  - g. For groundwater samples that exceed the ground water quality standards in 15A NCAC 02L .0202, the Regional Office shall be contacted within 30 days after submission of the groundwater monitoring form; an evaluation may be required to determine the impact of the waste disposal activities. Failure to do so may subject the permittee to a Notice of Violation, fines, and/or penalties.
  - h. The provisions of sections 3(f) and 3(g) apply only to the sampling events described in 3(b) above. The reporting requirements for any sampling events other than those described in 3(b) above shall be in accordance with the general provisions of 15A NCAC 02L.
3. **MONITORING WELLS, PARAMETERS, AND SAMPLING FREQUENCY.**
- a. Laboratory methods shall be EPA approved and sufficient to detect constituent quantities at or below their individual 15A NCAC 02L groundwater standards.
  - b. The following chart contains the compliance monitoring wells to be sampled, the parameters to be sampled, and the frequency in which the samples shall be collected.

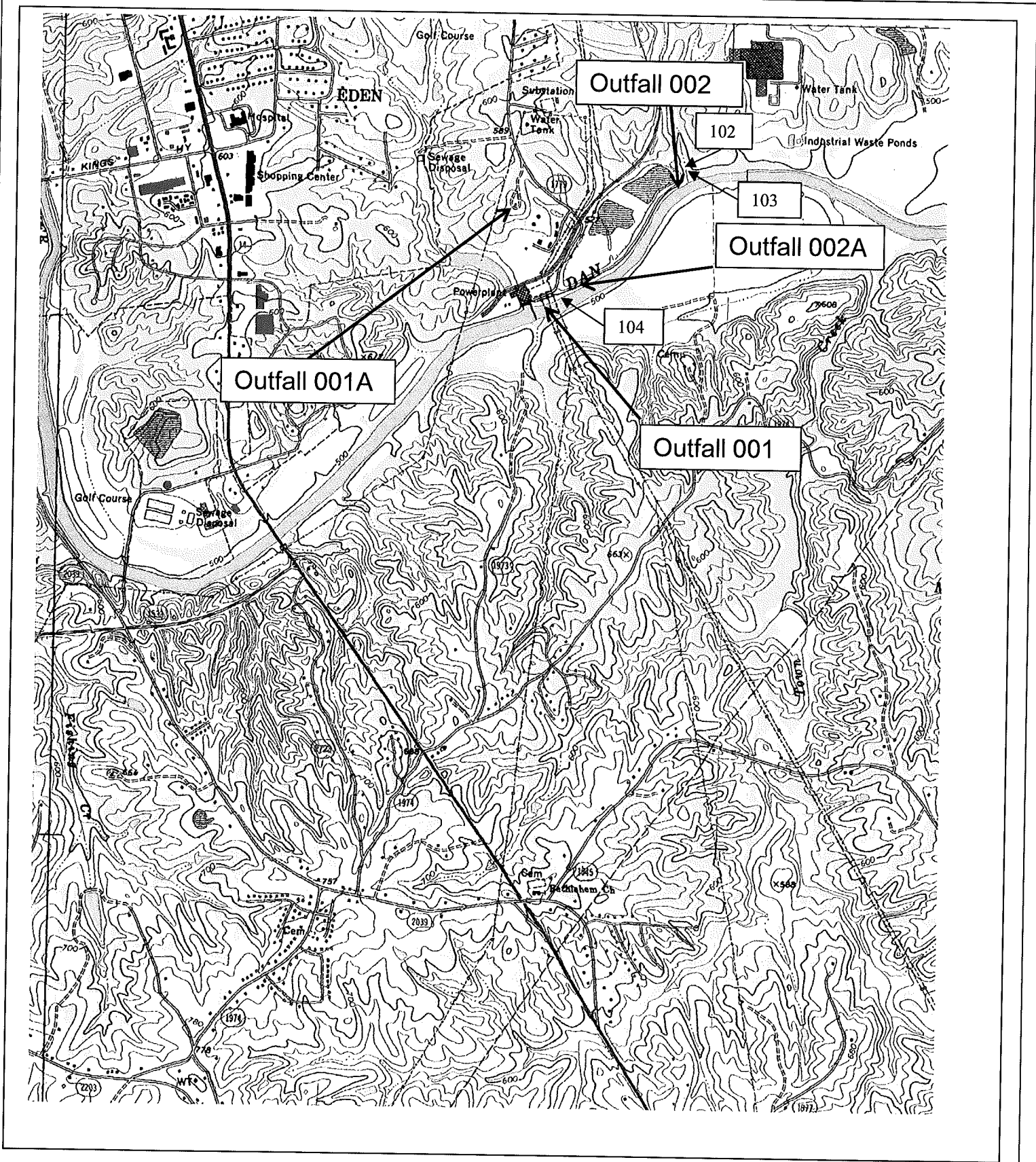
MONITORING WELLS	PARAMETERS				FREQUENCY
<b>MW-20S, MW-20D,                      MW-21S, MW-21D,                      MW-22S, MW-22D,                      MW-23D, BG-10S</b>	<i>Laboratory Parameters</i>				<b>January, May,                      September</b>
	<i>Aluminum</i>	<i>Antimony</i>	<i>Arsenic</i>	<i>Barium</i>	
	<i>Beryllium</i>	<i>Boron</i>	<i>Cadmium</i>	<i>Calcium</i>	
	<i>Cobalt</i>	<i>Chromium</i>	<i>Copper</i>	<i>Iron</i>	
	<i>Lead</i>	<i>Magnesium</i>	<i>Manganese</i>	<i>Molybdenum</i>	
	<i>Mercury</i>	<i>Nickel</i>	<i>Potassium</i>	<i>Selenium</i>	
	<i>Sodium</i>	<i>Strontium</i>	<i>Thallium</i>	<i>Vanadium</i>	
	<i>Zinc</i>	<i>Chloride</i>	<i>Sulfate</i>	<i>Alkalinity</i>	
	<i>Bicarbonate</i>	<i>Carbonate</i>	<i>Total Dissolved Solids</i>	<i>Total Suspended Solids</i>	
	<i>Field Parameters</i>				
	<i>Turbidity</i>	<i>pH</i>	<i>Temperature</i>	<i>Specific Conductance</i>	
	<i>Dissolved Oxygen</i>	<i>Oxidation Reduction Potential</i>	<i>Water level</i>		

Attachment 2

Plan for Identification of New Discharges (State Enforceable Only)

<https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/NPDES%20Coal%20Ash/Dan%20River%20Plan%20for%20Identification%20of%20New%20Discharges%20Sept%2030%202014.pdf>





USGS Quad: B20NW Southeast Eden, NC

**Outfall 001**

**Outfall 002**

Latitude: 36° 29' 7.9" N  
Longitude: 79° 43' 13.9" W

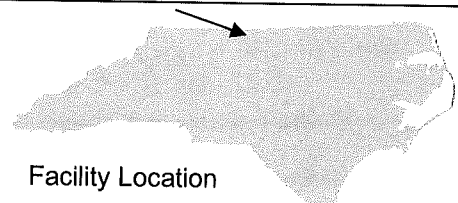
Latitude: 36° 29' 30.1" N  
Longitude: 79° 42' 39.6" W

Subbasin: 03-02-03

HUC: 03010103

Stream Class: C

Receiving Stream: Dan River



Facility Location

**Duke Energy Carolinas - Dan River Station**  
NPDES Permit No. NC0003468 Rockingham County

